

COURSE OUTLINE
ARCM-102
Architectural Materials and Methods II
3 Semester Hours

HOWARD COMMUNITY COLLEGE

Description

This course is the second semester of a two semester architectural methods and materials course. Students will continue to learn about the basic materials and terminology used in construction. The course will address the types of materials and systems required for a controlled environment. Topics include plumbing, heating, cooling and electrical systems. Prerequisite: ARCM-101. (2 hours lecture, 2 hours lab)

Overall Course Objectives

Upon completion of this course, the student will be able to:

1. Comprehend basic vocabulary used in the construction industry.
2. Apply the principles of Divisions 9 through 16 of the Construction Specification Institute's (CSI) 16 Division Master Format.
3. Interpret wall and finish schedules.
4. Identify the building systems and schedules used in Plumbing, HVAC and Electrical drawings.
5. Discuss the basic functions, options, and differences between building systems.
6. Describe how the relationships between each of the CSI Divisions establish an environment that supports the function of the building.
7. Interpret UL assemblies, STC ratings and the thermal conductivity of different materials.
8. Recognize the role of codes and design parameters related to fire protection systems.

Major Topics

- I. Finishes
 - A. Exterior
 - B. Interior
 - C. Sitework

- II. Specialties
 - A. Exterior
 - B. Interior
 - C. Safety

- III. Equipment
 - A. Commercial
 - B. Residential

- IV. Furnishings
 - A. Art
 - B. Window Treatments
 - C. Casework
 - D. Furnishings and Accessories
- V. Fire Protection Systems
 - A. Water-based Fire Suppression Systems
 - B. Fire Extinguishing Systems
 - C. Fire Suppression Equipment
- VI. Conveying Systems
 - A. Elevators and Escalators
 - B. Moving Walks
 - C. Lifts
- VII. Plumbing
 - A. Equipment
 - B. Fixtures
 - C. Pipes and Pumps
- VIII. HVAC
 - A. Fuel Systems
 - B. Central Heating and Cooling Equipment
 - C. Air Distribution
- IX. Electrical Systems
 - A. Lighting Systems
 - B. Electrical Distribution
 - C. Electrical Systems
- X. Heating and Cooling Loads
 - A. Heating Equipment
 - B. Cooling Equipment
 - C. Drying Equipment
- XI. Plans, Specifications and Codes
 - A. Layout
 - B. Schedules

Course Requirements

Grading/exams: Grading procedures will be determined by the individual faculty member but will be calculated on the basis of exams, homework assignments and group projects.

Other Course Information

This course is required in the Architectural and Construction Management Program.